

REMARKS

In the aforementioned claim amendments, claims 1-5, 9, 15 and 17-18 are amended, claim 14 is canceled, and claim 21 is added. Now pending in the application are claims 1-13 and 15-21, of which claims 1, 5, 9, 15, 18 and 21 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

Applicants thank the Examiner for identifying that claims 3, 7, 11, 12 and 20 recite patentable subject matter. The Examiner's close review of the claims is greatly appreciated.

Claim Amendments

Claims 1-5, 9, 15 and 17-18 are amended to clarify the scope of the claimed invention. In particular, Applicants amend claims 1, 9 and 15 to recite the use of nonvolatile memory. The claim amendments further clarify the difference between the deletion of data in nonvolatile memory and the writing of data in nonvolatile memory. Claims 5 and 9 are also amended to remove the alternative recitation "or from the time at which a signal indicative of start of writing operation of the new data is received from the vehicle controller," to further clarify the scope of the claimed invention. Support for the claim amendment can be found in Figs.1-4 and corresponding description in the specification. No new matter is added by this amendment and no new issues are raised. Applicants contend that the pending claims, as amended, are patentable and in condition for allowance.

Claim Rejections under 35 U.S.C. § 102

Claims 1, 2, 5, 6, 9, 10, 15, 16, 18 and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,405,279 to Kondo *et al.* ("Kondo"). Applicants respectfully traverse this rejection in light of the above claim amendments and the following remarks, and request reconsideration and withdrawal of the rejection.

Rejection of Claims 1 and 2

Claim 1 recites a device for deleting data in a *nonvolatile* memory element of a vehicle controller. The device is configured to wait without communicating with the vehicle controller for a predetermined waiting time from when a signal for requesting *deletion of the data in the nonvolatile memory* is sent to the vehicle controller, or from when a *signal indicative of starting of the deleting operation of the data* is received from the vehicle controller. Claim 2 depends from claim 1.

The Kondo reference describes a mechanism for receiving data from a rewriting device and writing the data into non-volatile memory of an ECU, where a receiving processing operation is executed in parallel with a writing processing operation to shorten the total time for receiving and writing data into the nonvolatile memory. Kondo also discloses in the background of the invention portion and in Figs. 8-10 that the ECU (10) transmits a communication interruption command (S4) and a communication restart command (S6) to the rewriting device (30).

Applicants respectfully submit that Kondo fails to disclose each and every element of Claim 1. Applicants submit that the Kondo reference fails to disclose that the device is configured to wait for a predetermined waiting time from when a signal for requesting *deletion* of the data in the *nonvolatile memory* is sent to the vehicle controller or from when a signal indicative of a start of a *deleting operation* is received from the vehicle controller, as recited in claim 1.

Applicant is mindful of the Examiner's comments regarding the phrases "deletion of data" and "rewriting of data," and specifically that the Examiner deems them to be essentially equivalent. Since claim 1 and other independent claims have been amended to recite a non-volatile memory, Applicants respectfully submit that deleting data from a non-volatile memory is very different from writing data to the non-volatile memory. Rather, there is a well known technical difference between these operations, and the ordinarily skilled artisan would not equate the two operations. For example, in EPROM,

for example, the memory element is exposed to a certain type of light (e.g., ultraviolet light) to delete data stored in the EPROM. This is typically accomplished by removing a protective cover from the top of the EPROM package. Also, a deletion operation is performed in an EEPROM or flash memory by applying an electrical signal to one or more pins. A separate and distinct operation is required to write data to the memory.

Applicants submit that Kondo only discloses rewriting of data into nonvolatile memory. Kondo does not disclose *deleting* data in the nonvolatile memory. Accordingly, Applicants submit that Kondo fails to anticipate claim 1.

Rejections of Claims 5, 6, 18 and 19

Claims 5 and 18 recite a device or a method for rewriting or writing data in the memory of a vehicle controller. The device is configured to *wait for a predetermined waiting time from when a signal for requesting the writing of data into the memory is sent to the vehicle controller*. Claims 6 and 19 depend from claims 5 and 18, respectively.

Applicants respectfully submit that Kondo fails to disclose that the device is configured to wait for a *predetermined waiting time* from when *a signal for requesting the writing of data into the memory* is sent to the vehicle controller, as recited in claims 5 and 18.

Applicants respectfully submit that the Kondo reference teaches that a communication interruption command (S4) and a communication restart command (S6) are transmitted to the rewriting device. In Kondo, the rewriting device is subject to the command transmitted from the ECU (10).

In contrast, in the claimed invention, the rewriting device sends the vehicle controller a requesting signal to write data into the memory and *waits for a predetermined waiting time period*. Accordingly, Kondo does not disclose that the rewriting device transmits to the ECU a signal for requesting the writing of data into the

memory, and then waits for a predetermined waiting time period. Accordingly, Applicants submit that Kondo fails to anticipate claims 5 and 18.

Rejection of Claims 9 and 10

Claim 9 recites a rewriting system for rewriting new data in the *nonvolatile* memory of a vehicle controller. The system includes a rewriting device that is configured to wait without communicating with the vehicle controller for a predetermined waiting time from when *a signal for requesting deletion of data or writing of the new data in the nonvolatile memory* is sent to the vehicle controller. Claim 10 depends from claim 9.

Applicants respectfully submit that Kondo fails to disclose each and every element of claim 9. Applicants submit that Kondo fails to disclose that the rewriting device is configured to wait for a predetermined waiting time from when *a signal for requesting deletion of data or writing of the new data in the nonvolatile memory* is sent to the vehicle controller, as recited in claims 5 and 18.

As described above in the arguments against the rejection of claim 1, Kondo does not disclose a system or device capable of *deleting* data in a *nonvolatile memory*. In addition, Kondo does not disclose that the rewriting device *waits for a predetermined waiting time period* from when a signal for requesting the writing of data into the *nonvolatile memory* is sent to the vehicle controller, as described above with reference to the rejection of claims 5, 6, 18 and 19. Accordingly, Applicants submit that Kondo fails to anticipate claims 9 and 10.

Rejection of Claims 15 and 16

Claim 15 recites a method for deleting data in the *nonvolatile* memory of a vehicle controller via a device. The device is configured to *wait without communicating* with the vehicle controller for a predetermined waiting time from when a signal for requesting *deletion of the data in the nonvolatile memory* is sent to the vehicle controller. Claim 16 depends on claim 15.

Applicants respectfully submit that the Kondo reference fails to disclose each and every element of claim 15. Applicants submit that Kondo fails to disclose that the device is configured to *wait for a predetermined waiting time* from when *a signal for requesting deletion of data in the nonvolatile memory* is sent to the vehicle controller, as recited in claim 15.

In further contrast, as described above, Kondo fails to disclose the *deletion* of data in the nonvolatile memory. Accordingly, Applicants respectfully submit that the Kondo reference fails to disclose each and every element of claims 15 and 16.

In light of the claim amendments and aforementioned arguments, Applicants submit that the Kondo reference fails to disclose each and every elements of the claimed invention. Applicants therefore submit that claims 1, 2, 5, 9, 10, 15, 16, 18 and 19 are in condition for allowance.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejects claims 4, 8, 13 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Kondo in view of U.S. Patent No. 6,205,580 to Hirose (“Hirose”). Applicants respectfully traverse this rejection in light of the following remarks, and request the reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

Claims 4, 8, 13 and 17, which depend on claim 1, 5, 9 and 15, respectively, add to claim 1, 5, 9 and 15 a separate patentable feature that the deleting time and/or writing time is calculated based on the size of the data and the specification of the memory.

Applicants submit that Kondo and Hirose, either alone or in combination, fail to teach or suggest all of the claim limitations of claims 4, 8, 13 and 17. Applicants submit that Kondo and Hirose fail to teach or suggest that the deleting time and/or writing time is calculated based on the size of the data and the specification of the memory.

The Examiner admits that Kondo does not show that the deleting time is calculated based on the data and the specification of the memory. Hirose is cited to compensate for this deficiency.

Hirose teaches a method of loading a program, wherein a relative address format file is transformed into an absolute address format program, and stores the absolute address format program in the memory. Hirose teaches a method for loading or executing a program, even if the system does not have a memory resource sufficient to map a relative address format file in the memory.

Hirose only teaches dividing the file into smaller files and storing them in a plurality of media and having the loader sequentially load the divided files and locate them on the memory by rearranging them into a single program. Hirose does not teach or suggest *calculating the time* for loading a program into memory based on the size of the file and the specification of the memory.

In light of the aforementioned arguments, Applicants submit that Kondo and Hirose fail to teach or suggest all claim limitations of the claimed invention. Applicants therefore submit that claims 4, 8, 13 and 17 are in condition for allowance.

New Claim

New claim 21 is directed to a device for deleting data in nonvolatile memory of an ECU, and hence is similar in some respects to claim 1. The claimed device further waits without communicating with the vehicle controller until a predetermined waiting time elapses from the time at which a signal for requesting deletion of the data in the nonvolatile memory is sent to the vehicle controller. Based on the arguments set forth above that Kondo does not teach deleting data from a non-volatile memory element, and that Kondo does not teach allowing a predetermined waiting time to elapse before

initiating the communicating with the vehicle controller. Applicants accordingly submit that new claim 21 is also free of the art, and in condition for allowance.

CONCLUSION

For the foregoing reasons, Applicants contend that the claimed invention defines over the cited art. If there are any remaining issues, an opportunity for an interview is requested prior to the issuance of another Office Action. If the above amendments are not deemed to place this case in condition for allowance, the Examiner is urged to call Applicants' representative at the telephone number listed below.

Respectfully submitted,
LAHIVE & COCKFIELD, LLP


Anthony A. Laurentano
Registration No. 38,220
Attorney for Applicants

28 State Street
Boston, MA 02109
(617) 227-7400
(617) 742-4214

Date: **May 5, 2004**